

What is claimed is

1 1. A system integrated circuit that is incorporated into
2 an apparatus together with a memory device, the memory device
3 storing confidential data, the system integrated circuit
4 comprising:

5 a central processing unit;

6 an access unit for reading and writing to and from the
7 memory device;

8 an indication unit for performing an indication
9 operation at initialization of the apparatus, the indication
10 operation indicating to the central processing unit to start
11 up; and

12 a read control unit for performing a read control
13 operation, the read control operation controlling the access
14 unit to read the confidential data from the memory device,

15 wherein the read control operation performed by the read
16 control unit precedes the indication operation performed by
17 the indication unit.

1 2. The system integrated circuit of Claim 1,

2 wherein the apparatus includes a clock signal generator
3 that starts outputting a clock signal at the initialization
4 of the apparatus, the clock signal being a time series of
5 clock pulses,

6 the system integrated circuit further comprises a
7 counter for counting a number of clock pulses in the time
8 series outputted by the clock signal generator,

9 the indication unit performs the indication operation
10 when a count of the counter reaches a first predetermined
11 value, and

12 the read control unit performs the read control operation
13 when the count of the counter reaches a second predetermined
14 value that is smaller than the first predetermined value.

1 3. The system integrated circuit of Claim 2,
2 wherein the indication operation is to switch an internal
3 reset signal from an inactive state to an active state.

1 4. The system integrated circuit of Claim 3,
2 wherein the apparatus includes an external reset signal
3 output unit for switching an external reset signal from an
4 inactive state to an active state, and

5 the counter starts counting the number of the clock pulses
6 when the external reset signal is switched to the active state.

1 5. The system integrated circuit of Claim 1,
2 wherein the confidential data is encrypted data obtained
3 by encrypting identification information relating to the
4 apparatus or a user who operates the apparatus,

5 the system integrated circuit further comprises a
6 decryption unit for decrypting the encrypted data read by
7 the access unit, to obtain the identification information,
8 and

9 the central processing unit performs processing using
10 the obtained identification information, after indicated to
11 start up.

1 6. The system integrated circuit of Claim 1,
2 wherein the confidential data is a device key that is
3 unique to the memory device,

4 the system integrated circuit further comprises an
5 encryption unit for encrypting, when an instruction to write
6 data is given by the central processing unit, the data using
7 the device key, and

8 the access unit writes the encrypted data to the memory
9 device.

1 7. The system integrated circuit of Claim 6,
2 wherein the access unit reads the encrypted data from
3 the memory device when an instruction to read the data is
4 given by the central processing unit, and

5 the system integrated circuit further comprises a
6 decryption unit for decrypting the read encrypted data using
7 the device key.

1 8. The system integrated circuit of Claim 7,
2 wherein the apparatus includes a reception unit for
3 receiving a broadcast wave,
4 the data to be written to the memory device is obtained
5 by the reception unit receiving the broadcast wave, and has
6 been encrypted according to an encryption method determined
7 by a broadcaster beforehand, and
8 the encryption unit encrypts, using the device key, the
9 obtained data that has been encrypted, when the instruction
10 to write the data is given by the central processing unit.

1 9. The system integrated circuit of Claim 8,
2 wherein the decryption unit
3 (a) decrypts the encrypted data that has been read into
4 the system integrated circuit from the memory device, and
5 (b) further decrypts the resulting data based on the
6 encryption method, to obtain the data in an original state.

1 10. The system integrated circuit of Claim 1,
2 wherein the memory device is connected to the system
3 integrated circuit via a bus, and
4 the access unit
5 (a) receives the confidential data via the bus, when
6 the read control operation is performed by the read control
7 unit, and

8 (b) receives data or an instruction via the bus, when
9 the central processing unit starts processing.

1 11. The system integrated circuit of Claim 1,
2 wherein the memory device is connected to the system
3 integrated circuit via a serial line, and
4 the access unit

5 (a) receives the confidential data from the memory device
6 via the serial line, when the read control operation is
7 performed by the read control unit, and

8 (b) receives data or an instruction from the memory device
9 via the serial line, when the central processing unit starts
10 processing.

1 12. The system integrated circuit of Claim 1,
2 wherein the memory device is connected to the system
3 integrated circuit via a bus and a serial line, and
4 the access unit

5 (a) receives the confidential data from the memory device
6 via the serial line, when the read control operation is
7 performed by the read control unit, and

8 (b) receives data or an instruction from the memory device
9 via the bus, when the central processing unit starts processing.

1 13. A system integrated circuit that is connected to

2 a memory device, the memory device storing confidential data
3 and a program that includes a plurality of instructions, the
4 system integrated circuit comprising:

5 a central processing unit for sequentially reading and
6 decoding the instructions included in the program; and

7 a storage unit having a plurality of storage regions;

8 wherein the program includes a first instruction to read
9 the confidential data and a second instruction to perform
10 processing using the confidential data, the first instruction
11 preceding the second instruction, and

12 the system integrated circuit further comprises a read
13 unit for reading the confidential data from the memory device
14 and writing the read confidential data to a predetermined
15 one of the storage regions, when the first instruction is
16 decoded by the central processing unit.